



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,910	08/08/2001	James R. Charlton	00,283	2863

32423 7590 12/31/2003

SPRINT COMMUNICATIONS COMPANY L.P.  
6391 SPRINT PARKWAY  
KSOPHT0101-Z2100  
OVERLAND PARK, KS 66251-2100

EXAMINER

CHEN, PO WEI

ART UNIT	PAPER NUMBER
----------	--------------

2676

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/924,910

Applicant(s)

CHARLTON ET AL.

Examiner

Po-Wei (Dennis) Chen

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on September 29, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

In response to an Amendment received on September 29, 2003. This action is final/non-final.

Claims 1-23 are pending in this application. Claims 1, 11 and 18 are independent claims.

The present title of the invention is "Graphic Display of Network Performance Information".

The Group Art Unit of the Examiner case is now 2676. Please use the proper Art Unit number to help us serve you better.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 6, 7, 10, 11, 13, 14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Planas (US 6,112,015; refer to as Planas herein).

3. Regarding claim 1, Planas discloses a network management graphical user interface comprising:

A graphic process for substantially simultaneously displaying on a computer display device variations in a plurality of communication network functions (see lines 1-5 of abstract and lines 53-59 of column 6 and Fig. 4b);

(a) providing access to a plurality of communication network functions, each network function having a data value within a range of data values (see 42-45 of column 5, lines 53-59 of column 6, Fig. 4b and Fig. 2f). It is noted that while claim recites a range of data values, it's

Art Unit: 2676

clear that the number 192 in Fig. 2f will vary depending on the capacity for the network function and therefore a range of data values is available. Thus, limitation of claim is met.

(b) dividing a display area into a plurality of display divisions (see Fig. 4b and 4d);

(c) assigning each display division to a respective network function (see Fig. 4b);

(d) scaling a variable graphic quality of each display division to said range of data values of said network function associated with said display division (“To bubble modifier icon and the basic icon are also coloured to draw attention to them, and to reflect the severity of the alarm, where the colours yellow, orange and red are used to indicate increasing severities minor, major, and critical respectively”, see lines 26-31 of column 12);

(e) periodically accessing each of said network functions to retrieve a respective current data value (“By clicking on the information icon, detailed information is then displayed”, see lines 33-40 of column 11 and Fig. 12);

(f) displaying for each display division a respective variation of said graphic quality which corresponds to said current data value of the network function associated with said display division (see lines 26-31 of column 12).

4. Regarding claim 3, Planas discloses a network management graphical user interface comprising:

Art Unit: 2676

Scaling a variable graphic quality; (a) scaling a range of colors to said range of data values (“To bubble modifier icon and the basic icon are also coloured to draw attention to them, and to reflect the severity of the alarm, where the colours yellow, orange and red are used to indicate increasing severities minor, major, and critical respectively”, see lines 26-31 of column 12).

5. Regarding claims 6 and 7, Planas discloses a network management graphical user interface comprising:

(a) linking at least one of said display divisions to additional information associated with said network function associated therewith; (b) displaying said additional information in response to graphic selection of said display division (see lines 33-40 of column 11 and lines 1-7 of column 20).

(a) linking at least one of said display divisions to graphically encoded information associated with said network function associated therewith; (b) displaying said graphically encoded information in response to graphic selection of said display division. (see lines 33-40 of column 11 and lines 1-7 of column 20).

6. Regarding claim 10, Planas discloses a network management graphical user interface comprising:

(a) displaying human readable indicia on at least one of said display divisions to thereby identify a network function associated with said one display division (see Fig. 4b).

7. Regarding claim 11, as statements presented, above, with respect to claims 1 and 3 are incorporated herein. Also, it is noted that Planas disclose (b) dividing a rectangular display area

Art Unit: 2676

into a plurality of display divisions (see lines 9-13 of column 6 and lines 26-28 of column 19 and Fig. 2d);

8. Regarding claim 13, as statements presented, above, with respect to claim 6 are incorporated herein.

9. Regarding claim 14, as statements presented, above, with respect to claim 7 are incorporated herein.

10. Regarding claim 16, as statements presented, above, with respect to claim 10 are incorporated herein.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 2, 4, 5, 8, 9, 12, 15 and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Planas et al. (US 6,112,015; refer to as Planas herein) as applied to claim 1 above, and further in view of Baker et al. (US 5,581,797; refer to as Baker herein).

2. Regarding claim 2, it is noted that Planas does not disclose scaling a variable graphic quality; (a) scaling a shade value to said range of data values. However, this is known in the art taught by Baker. Baker teaches a method for displaying hierarchical information of a large software system that "some of the geometric shapes 307 are shaded. In FIG. 3A, this shading represents the proportion of newly written NCS line in the subsystem" (see lines 55-57 of column 5). It would have been obvious to one of ordinary skill in the art at the time of invention

Art Unit: 2676

to utilize the teaching of Baker, using shaded shape to represent data values of entities in a software system to provide user a greater understanding of the system through visualization (see lines 12-16 of abstract, Baker). Also, Baker discloses that the visualization method could be used other large systems (see lines 18-20 of column 8).

3. Regarding claim 4, it is noted that Planas does not disclose scaling a variable graphic quality; (a) scaling a size of a display division to said range of data values. However, this is known in the art taught by Baker. Baker teaches a method for displaying hierarchical information of a large software system that “the area of each geometric shape 307 is the same proportion to the entire display space 303 as the number of NCS lines of its corresponding subsystem has to the total number of NCS lines in the entire software system” (see lines 51-55 of column 5).

4. Regarding claim 5, Planas discloses a network management graphical user interface comprising:

At least one of said network functions includes a data set of a plurality of data members, each data member having a corresponding data member value within said range of data values (“Each container icon ‘contains’ a collection of network object icons”, see lines 46-56 of column 6, lines 42-45 of column 5 and Fig. 2f and 4b);

(c) periodically accessing said at least one of said network functions to retrieve a respective current data member value of each of said plurality of data member (“This might expand the container icon to display the collection of network object icons or additional lower level container icons which it represents” and “By clicking on the information icon, detailed information is then displayed”, see lines 50-59 of column 6 and lines 33-40 of column 11 and

Art Unit: 2676

Fig. 4b and 12). It is noted that each container icon such as element 82 (Transport) of Fig. 4b can be expanded to display object icons which then can be accessed to display detail information. Thus, limitation of claim is met.

It is noted that Planas does not disclose (a) dividing said display division associated with said at least one of said network functions into a plurality of display subdivisions equal to said plurality of data members of said data set; (b) assigning each of said display subdivisions to a respective one of said plurality of data members; (d) displaying for each display subdivision a respective variation of said graphic quality which corresponds to a current data member value of the data member associated with said display subdivision. However, this is known in the art taught by Baker. Baker teaches a method for displaying hierarchical information of a large software system that "the geometric shape 507 is divided into rectangles 509 that all have the same extent in the y-direction...the medium gray 524 shading that is in the foreground of window 501 represents the percentage of new NCS lines in each respective directory 509" (see lines 30-55 of column 6 and Fig. 5).

5. Regarding claim 8, Planas discloses a network management graphical user interface comprising:

(a) linking at least one of said display divisions to additional information associated with said network function associated therewith (see lines 33-40 of column 11 and lines 1-7 of column 20);

It is noted that Planas does not disclose (b) displaying said additional information in response to placement of a graphic cursor within said display division. However, this is known in the art taught by Baker. Baker teaches a method for displaying hierarchical information of a



Art Unit: 2676

large software system that “each window is logically linked by the location of the pointer 107 to information region 410 such that the numeric and alphanumeric regions will display the subsystem the pointer 107 is located in” (see lines 57-61 of column 6 and Fig. 1 and 4).

6. Regarding claim 9, it is noted that Planas does not disclose variable graphic quality varies in discrete steps; (a) displaying for each display division a respective step variation of said graphic quality which corresponds to said current data value of the network function associated with said display division. However, this is known in the art taught by Baker. Baker teaches a method for displaying hierarchical information of a large software system that (see lines 51-67 of column and Fig. 3A-B). It is noted that the graphic quality or shading of the regions is corresponding to the number of lines, which varies in discrete steps.

7. Regarding claim 12, as statements presented, above, with respect to claim 3 and 5 are incorporated herein.

8. Regarding claim 15, as statements presented, above, with respect to claim 8 are incorporated herein.

9. Regarding claim 17, as statements presented, above, with respect to claim 4 are incorporated herein.

10. Regarding claim 18, as statements presented, above, with respect to claims 1, 3 and 5 are incorporated herein.

11. Regarding claim 19, as statements presented, above, with respect to claim 5 and 6 are incorporated herein. Also, it is noted that Baker further disclose additional information such as shading corresponding to its data values for each subdivision (see Fig. 5).

Art Unit: 2676

12. Regarding claim 20, as statements presented, above, with respect to claim 7 are incorporated herein.

13. Regarding claim 21, as statements presented, above, with respect to claim 8 are incorporated herein.

14. Regarding claim 22, as statements presented, above, with respect to claim 4 are incorporated herein.

15. Regarding claim 23, as statements presented, above, with respect to claim 4 are incorporated herein. Also see lines 30-55 of column 6 and Fig. 5 of Baker.

***Response to Arguments***

16. Applicant's arguments filed September 29, 2003 have been fully considered but they are not persuasive.

Regarding claims 1, 11 and 18, the Applicant argues reference Planas does not disclose the limitations of dividing a display area into a plurality of display divisions and dividing a rectangular display area into a plurality of display divisions. However, this is known in the art taught by Planas (lines 9-13 of column 6 and lines 26-28 of column 19 and Fig. 2d, 4b and 4d; it is noted that each network function or region can be display in a divided area such as Fig. 4d or 2d. The claim does not include any detail about the term divided area or display divisions. Thus, the limitation of the terms are met by the display area being plurality of display divisions and each corresponds to a network function or region.

Regarding claims 1, 11 and 18, the Applicant argues reference Planas does not disclose scaling a variable graphic quality of each display division to said range of data values of said network function associated with said display division and for each network function, scaling a

Art Unit: 2676

set of a plurality of colors to the range of data values of said network function. However, this is known in the art taught by Planas (lines 26-31 of column 12; each network function is being giving different colors (variable of graphic quality) to represent the range of network data such as alarm levels. While Planas only disclose 3 levels, it is considered as a range).

Regarding claims 1, 11 and 18, the Applicant argues reference Planas does not disclose periodically accessing each of said network functions to retrieve a respective current data value. However, this is known in the art taught by Planas (lines 33-40 of column 11 and Fig. 12; it is noted that the network is being accessed by the user to retrieve information and periodically is being defined as how often the user accessing the information since no further detail is being set on the term periodically).

The Applicant argues there is no suggestion to combine reference Baker with Planas. However, since both Planas and Baker are directed to a method of visualization of data in a system. By utilizing the teaching of Baker, it would provide user a greater understanding of the system (lines 12-16 of abstract of Baker). And Baker further noted that the visualization method can be used on other system (lines 18-20 of column 8).

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bertram et al. (US 6,144,379) disclose "Computer Controlled User Interactive Display System for Presenting Graphs with Interactive Icons for Accessing Related Graphs".

Bereiter (US 5,909,217) discloses "Large Scale System Status Map".

Dev et al. (US 5,295,244) disclose "Network Management System Using Interconnected Hierarchies to Represent Different Network Dimensions in Multiple Display Views".

Labeledz et al. (US 5,608,854) disclose "Method and Apparatus for Displaying Information in a Communication System".

Richardson (US 6,054,987) discloses "Method of Dynamically Creating Nodal Views of a Managed Network".

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

#### ***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-8365. The examiner can normally be reached on 9am-5pm.

Art Unit: 2676

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C Bella can be reached on (703) 308-6829. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Po-Wei (Dennis) Chen  
Examiner  
Art Unit 2676

Po-Wei (Dennis) Chen  
December 17, 2003



MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600